118, 148

Chiriguano 8F19
Choroti 8K8
Mataco 8J7
Tehuelche 8J5
Cayua 8F9
Tucano 8Q19
Guarani 8M4
Timbira 8Q8
Araucanians 8Q4
Paez 8C15
Canari 8D4
Jivaro 8D9
Aymara 8F8
Ona 8H4
Yahgan 8H8

/For information on genic locations based on Streng's diagram of co-ordinates of the blood groups of the natives of South America, see: Hill et al., 8818 Warao, Category 118, pp. 107-114./

/706 cont./

work, carrying about with her the little creature whom she protects as best she can" /translated from French/ (Martial:197). Hyades (q):190 says very emphatically: "Childbirth is easy among the Fuegian women" /translated from French/. Nevertheless, even in earlier times there were occasionally difficult deliveries. In this connection Hahn (s):807 exaggerates slightly when, referring to Bridges, he says that "complications and abnormal positions are not rare in childbirth" /translated from French/.

When Adelheid's first child was born, it was a dangerous cross-birth, and the assistant had great difficulty keeping mother and child alive. Fearing that she would experience the same danger another time, she resorted to the preventive measure recommended to women who do not want any more children. She threw the placenta to the dogs, who devoured it completely. To prove how reliably effective this procedure is, the women constantly pointed to Adelheid who had not become pregnant again for almost two decades. Her husband, Santiago, was extremely worried about her for a long time, but he repeated what another man also told himself in a rare case of a difficult birth: "It is better that I give up having more children than that I lose my wife!" It is the husband himself who demands that the placenta be thrown to the dogs after a seriously difficult birth, or he does it himself, since he is called as soon as the woman seems to be in danger during labor. /707/ Sympathy impels him to this decision; he does not wish to expose his wife again to such pain or danger. Adelheid's sister, Elisa, had trouble, more or less, with each of her six children, and twice she had a miscarriage (p.481). We probably should not overlook an inherited tendency in this case, for the third sister, Gertie, although she has had a few premature deliveries, has not carried a single healthy child for the normal period. No one will be able to determine whether European civilization has had a detrimental effect on these women. Their mother, who is still living, did not have such difficulties.

3. The Parents of the Newborn Child

As we have said, every Yamana woman gives birth in her own dwelling, if possible. She is assisted by an actual midwife and sometimes also by the adopted mother of the new baby. Her

/715 cont./
736 powered in her hands so as those of my mother (141).
857

141. Lowians (p).150 simply repeats what Bridges (n).183 observed long before: "If the mother dies, the little one soon finds a foster-mother, by whom considerable affection is shown" /tr.out of English/.

662 Occasionally it has been maintained that the children are conspicuously small at birth, and Bridges (j).21 writes: "The children are decidedly small at birth and to this fact may be chiefly attributed the mother's immunity from danger" /tr.out of English/. Rowe (x).158 repeats this. Nothing justifies this assumption, and it is a fact that Bridges was by no means in a position to prove it. The color of the skin of the newborn child is considerably lighter than that of adults and later becomes somewhat darker. Fitz-Roy (x).170 says about the Yaghan and Alakaluf in general: "Little children are nearly of the same hue as their parents' skin is when cleaned, but inform us, for a few days, rather lighter coloured" [643] /tr.out of English/. The slight differences in the skin color of newborn children are hereditary.

703 There is a story dealing with the external appearance of the little ones, which old Čoonnis, father of Chris, sometimes told young women. "A long time ago a woman became pregnant. She was delivered extraordinarily quickly, and the child left the mother's womb without the slightest hindrance. Immediately it exhibited its limbs, stood up by itself, and walked around a bit, for it was strong and sturdy enough to do this. Immediately after that it hastened back into its mother's womb. Thus the belly of that woman grew big. But soon the child again left its mother's womb, stood up, and walked about freely for a little while, then it hastened back in again. Horrifyingly the mother lay there and grew big; she did not know what was happening to her. Since the child came out again and once more returned, she grew ever /716/ weaker. Meanwhile the child had grown and become larger, so she, too, swelled constantly. Finally she died as she once more lay on her sleeping place near the fire. At once she dissolved into nothingness, as though she had never consisted of flesh and bones. --

3: Lothrop E-5 (1924-1929) 1929
3955 Yahgan 3955

and facial height are measured, second, because of age changes in the individual which affect these parts. The length of the nose increases with age and the length of the face tends to diminish with wear and loss of teeth. Nevertheless it would appear that these indices in the Ona group by their dispersion indicate a lack of homogeneity of the group when compared with the measurements and indices previously considered.

It is proposed to consider here the problem of Ona and Yahgan anthropometry only so far as deductions may be made from the accompanying table and from information as to the environmental factors which seem to be important. First of all it is apparent that the Yahgan as a group are less homogeneous than the Ona, particularly in the case of the males. How may this difference in variability be explained? The conditions of diet, occupation, climate, etc., are somewhat different from those obtaining in the case of the Ona, but presumably quite uniform for the entire Yahgan group. Indeed it would appear that the life of the Ona is much more variegated than that of the adjoining tribe. The Yahgan are canoe people, but it does not seem probable that their life in boats and on the shore would tend to diversify them in physical type any more than the running life of the Ona. I think we must admit that the Yahgan owe their greater variability probably to the presence of more diverse physical types of an hereditary character than are found among the Ona. By this I mean that two or three, or more perhaps, of the various elements which have blended to form the composite "Indian" race in America, are found among the Yahgan, whereas in the Ona we have to deal either with a single type or with a group in which one single type overwhelmingly predominates.

In a "refuge" area one may expect to find all sorts of samples of the weaker and more primitive populations which have, from time to time, inhabited the continent. These odds-and-ends are likely to have been reduced to a certain homogeneity through isolation which brings about inbreeding and through selection. Both of these factors are notably operative in Tierra del Fuego. I think that it is an assumption justified by the evidence that the earliest inhabitants of the New World were short dolichocephals and that these were followed by short brachycephals. Among the Yahgan we have a fusion of two such elements, just as we have, to cite another instance, in Pueblo peoples of southwestern United States.

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6

●143 We must however consider the possibility that the canoe life of the Yahgan has tended to exercise a selective influence on their stature. Small men are less likely to fall out of small and primitive canoes than are large and unwieldy men. Great length of legs (which always distinguishes tall persons) is a great disadvantage in such craft. We are given to understand that the Yahgan women swim well and the men not at all. If this is true, it is conceivable that the shorter elements in this population have survived because the larger men proved to be too awkward for canoeing and were consequently eliminated by drowning. But this would necessitate the assumption that the large women were also eliminated or that they failed to transmit their large stature. While it is perfectly true that a large woman and a small canoe make a bad combination, it is equally true that a large woman makes as good a floater or swimmer as a small woman, and even a better.

However, there is another possibility that is worthy at least of mention. The legs of the Yahgan may have been shortened as a result of their boating habits. It is perfectly easy to suppose that a man who spends most of his time sitting in a canoe will have poorly developed legs, as have the Yahgan. It is not at all certain, however, that disuse of the legs for purposes of locomotion would necessarily decrease their length. And it is altogether improbable that such a decrease in leg length would establish itself as an hereditary characteristic. Moreover, the Yahgan are not merely "sawed-off" counterparts of the Ona. Not only are their legs shorter, but they are smaller in every way than their neighbors.

On the whole I am inclined to believe that the stocks which have blended to form the Yahgan were originally short-statured, short-legged peoples, and that, although canoe life may have operated to some extent to eliminate the taller individuals, the stunted stature of this people is in the main a characteristic of the original stocks from which they sprung.

The Ona are one of the tallest people in the world if any reliance can be placed upon our compiled figures and upon the estimates of various writers. They are exceptionally homogeneous in stature and in cephalic dimensions and indices, but not especially so in facial measurements and indices. They are not canoe people, but range over a wide area on foot. Apparently they have a harder time in gaining their subsistence than do the Yahgan. Are we to suppose that these people have attained their commanding

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height by the exercise of their lower limbs in walking? We do not know that walking increases the length of the legs. Very tall men are not especially good walkers in the experience of modern armies; short men march more rapidly and endure better. On the other hand, there is nothing to lead us to suppose either that walking shortens the legs or that a life of wandering about on foot would tend to eliminate by some process of selection the short-legged strains. If one were to attribute the maximum imaginable effect to natural selection or to processes of atrophy and hypertrophy in altering either by selection or by the transmission of functional adaptations the hereditary leg-lengths of Ona and Yahgan, and if we brought ourselves to believe that some environmental agency had radically shortened the legs of the latter and lengthened those of the former, we should still be faced by a difference in stature between the two groups altogether beyond the adequacy of such an explanation. The Ona males are more than 17 cm. taller than the Yahgans!

At this point we may inquire with Cassius:

> "Now, in the name of all the gods at once,
> Upon what meat doth this our Caesar feed
> That he is grown so great?"

If we take into consideration the dietetic differences between the Ona and the Yahgan (see Table II), we observe that the outstanding fact is the dependence on the flesh of the guanaco by the Ona as contrasted with a reliance on mussels as a staple on the part of the Yahgan. Guanaco seems also to have been the principal article of diet of the Patagonian Tehuelche, who, according to reports, were as tall as the Ona, if not taller (mean stature of males 175 cm., according to Moreno and Lista). Yet it is hardly worth while to toy with the supposition that the statural differences between these groups are a matter of camel-meat versus shell-fish, especially since the ethnographic authorities seem to think that the Ona have a harder time in getting sufficient food than their stunted neighbors.

More promising perhaps is the factor of artificial selection in the warlike pursuits of the Ona. If it could be shown that the smaller and weaker of these people had been eliminated as a result of warfare, our problem would be solved. But in spite of the fact that the Ona are said to be more warlike than the Yahgan, it does not seem reasonable to ascribe their stature to military selection. There is no evidence, so far as I know, which would justify such a

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143 conclusion. Nevertheless, the statistical homogeneity of this group does argue that some sort of selection has been at work. The Ona men are said sometimes to take Yahgan wives, and if this is true we should expect some at least of the offspring of such unions to be short. The Ona women are, however, almost as tall for their sex as are the men. Could it be possible that the Ona practise infanticide upon undergrown specimens of their race? There is no evidence that such is the case.

It is reported that the Ona of Tierra del Fuego are not alone in their attainment of an unusual bodily size, since animals transported to this region far exceed the size and bulk to which they ordinarily grow in other places. For example, it is stated that the guanaco in Tierra del Fuego is larger than the same animal farther north in the Andean area. Also it is said that foxes grow large and that imported English cattle produce gigantic offspring. If this be the case, it is very difficult to account for the stunted Yahgan who have practically the same environment as the Ona.

Most anthropologists ascribe the size of the Ona to their probable relationship with the Patagonian Tehuelche, to whom they are also allied culturally. In other words, the size of the Ona is thought to be a matter of heredity. As a matter of fact this explanation seems to be the only possible one unless some physiologist can demonstrate that the slight differences between Yahgan and Ona diets are directly responsible for their disparity in size. Even more striking instances of statural difference within the same environment occur in East Africa and the Lake region where the shortest pygmies known live cheek-by-jowl with gigantic Hamito-Negroids, the tallest people in the world.

Tall stature is generally a matter of heredity, and it is thought by Davenport that certain growth-repressing factors are dominant over their absence, inasmuch as he found high variability in short families as contrasted with tall families. If this is correct it is possible that the stature of the Ona is an expression of a recessive feature in a relatively pure stock. But the Ona are said occasionally to take Yahgan wives, and the variability of their facial and nasal indices is scarcely indicative of purity of race. We must consider also the hypothesis of heterosis or hybrid vigor, whereby hybrid offspring often exceed both parents in bodily size. But heterosis does not manifest itself always in human crosses. It does not occur, for example, in crosses between Hawaiians and Chinese,

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nor apparently in most Negro-white crosses. There is, moreover, no evidence in the case of the Ona of any recent admixture with another stock except perhaps the Yahgan, who would scarcely be expected to contribute factors making for gigantic stature or even to maintain the average stature of any ordinary group with which they interbred. 143

I should be inclined to the speculation that the high stature of both Tehuelche and Ona is the result of the predominance in them of a tall and probably brachycephalic strain belonging to one of the later waves of immigrants into South America. I am of the opinion that this tall brachycephalic type, which occurs elsewhere in the New World, resulted from the intermixture of a brachycephalic type of medium stature with a tall dolichocephalic strain. It would appear that in this particular cross tallness was dominant. This is, admittedly, a speculation, but it is not based merely on a short consideration of the inadequate and second-hand anthropometric data on the Fuegians here presented. I do not pretend to be able to prove this contention, nor can I say exactly what "races" were involved in this postulated cross. I think, however, that the Mongoloid element in the American Indians came largely from the brachycephals, and that the tall dolichocephals were neither Negroid nor Mongoloid. Nor do I assume that the crossings which gave rise to this tall "hybrid" type necessarily took place in the New World; many of the American Indian groups included in this type may have originated in Asia.

We really need a good deal more of information about the effect of diet and climate on physical type before we can confidently dismiss the remarkable size contrast between the Ona and the Yahgan as a mere matter of hereditary difference. I should want more precise information about certain morphological characters of these two groups before committing myself finally to the opinion that they represent distinct racial combinations. However, upon the present showing I incline to the opinion that the size differences discussed above are primarily the result of hereditary factors, accentuated perhaps by occupational selection tending to make for shortness in the Yahgan and for great stature in the Ona.

[pp. 48-115 contain no data on the Yahgan. —Analyst]